

Renewable energy producer monetizes newly acquired biomass power plant with custom pulp mill



SOLUTION AT A GLANCE

Sim Agro Inc's proprietary Clean Pulp and Clean Energy Technology solution, comprises fiber washing and cleaning and non-wood pulping, powered by renewable energy and in situ production of chemicals that further utilize the renewable energy.

Why work with us

- Global leaders in clean pulp and clean energy technologies
- 200+ projects across 15 countries



"When your success is predicated on your customer's success, every action becomes customer-centric. At Sim Agro Inc, this is true whether we supply one piece of equipment or an entire non-wood pulp mill. We are technologists at heart focused on making our customer's lives easier."

Karthik Raghavan

President, Sim Agro Inc

CHALLENGES

The client acquired a moth balled biomass power plant (55MW) and wanted to move it to a location where they could use its output. However, moving the plant was an expensive proposition. What's more, the client did not know how to monetize the power produced by the plant as selling to the grid was not profitable.

SOLUTIONS

The client had always wanted to set up a non-wood pulp mill. Our experts helped marry this objective with the power plant acquisition. We designed a pulp mill to harness the power from the biomass power plant. We also introduced other chemical processes like generating sodium chlorate (NaClO_3) from brine water (NaCl) to further optimize the utilization of the power plant.

BENEFITS

Optimized profitability

Our solution helped maximize profitability while retaining the flexibility to send power to the grid when conditions are favorable.

Environmentally-friendly, bespoke technology

The land available near the power plant was not sufficient to set up a pulp mill - as pulp mills typically need high evaporation ponds for treated water. We studied the technologies used in other industries like fracking which use Zero Liquid Discharge technologies and redesigned it to suit our client's needs. This allows the client to operate without a waste water permit as there is no discharge, and enhances environmental friendliness by maximizing water reuse.

Clean Pulp Technology

Sim Agro Inc's Clean Pulp Technology Platform is specifically designed for non-wood pulping systems. Our proprietary technology addresses the unique needs of our clients - whether it's removing impurities from the fiber or effectively pulping feedstock.

The platform offers solutions to pulp agricultural residues like sugarcane bagasse, wheat straw, industrial hemp, and bamboo and turn them into paper products like printing writing paper, container board, sack kraft, molded product, tissue, towels and any number of sustainable products. It significantly enhances the the quality of pulp that determines the quality of the final products, while reducing costs.

Our Clean Pulp Technology is underpinned by our Clean Energy Platform which uses renewable energy of different forms - biomass, solar and wind - to minimize the carbon footprint of pulping operations. While using agricultural residues as feedstock is typically carbon neutral or even carbon negative, adding renewable energies to the mix makes it even more sustainable.

In addition, we provide Zero Liquid discharge systems that treat and reuse waste water completely. Finally, we offer ways to capture CO₂ in our system that is cost effective and further helps reduce Green House gases. Our continuous innovation in green energy and carbon capture is helping global paper and pulp manufacturers turn their long term sustainability goals into reality.